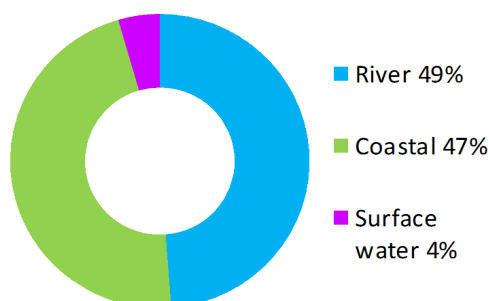


## Portpatrick (Potentially Vulnerable Area 14/14)

Local Plan District	Local authority	Main catchment
Solway	Dumfries and Galloway Council	Portpatrick coastal

### Summary of flooding impacts



#### At risk of flooding

- 10 residential properties
- <10 non-residential properties
- £54,000 Annual Average Damages

(damages by flood source shown left)

Summary of flooding impacts

### Summary of objectives to manage flooding

Objectives have been set by SEPA and agreed with flood risk management authorities. These are the aims for managing local flood risk. The objectives have been grouped in three main ways: by reducing risk, avoiding increasing risk or accepting risk by maintaining current levels of management.

Many organisations, such as Scottish Water and energy companies, actively maintain and manage their own assets including their risk from flooding. Where known, these actions are described here. Scottish Natural Heritage and Historic Environment Scotland work with site owners to manage flooding where appropriate at designated environmental and/or cultural heritage sites. These actions are not detailed further in the Flood Risk Management Strategies.

Objectives

### Summary of actions to manage flooding

The actions below have been selected to manage flood risk.

<i>Flood protection scheme/works</i>	<i>Natural flood management works</i>	<i>New flood warning</i>	<i>Community flood action groups</i>	<i>Property level protection scheme</i>	<i>Site protection plans</i>
<i>Flood protection study</i>	<i>Natural flood management study</i>	Maintain flood warning	Awareness raising	<i>Surface water plan/study</i>	Emergency plans/response
Maintain flood protection scheme	Strategic mapping and modelling	Flood forecasting	Self help	Maintenance	Planning policies

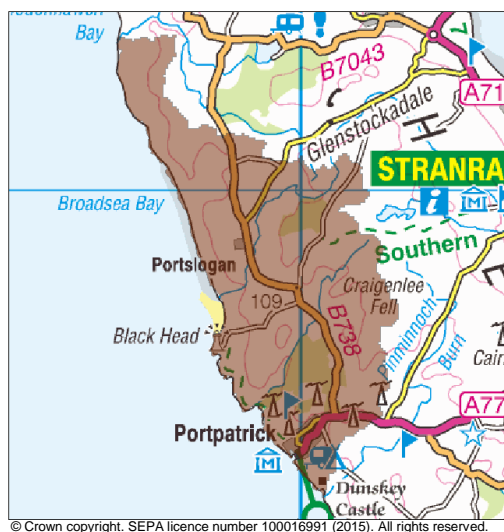
Actions

## Portpatrick (Potentially Vulnerable Area 14/14)

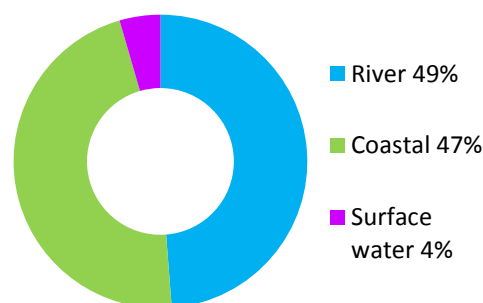
Local Plan District	Local authorities	Main catchment
Solway	Dumfries and Galloway Council	Portpatrick coastal

### Background

This Potentially Vulnerable Area is located at the western edge of the Solway Local Plan District and incorporates the village of Portpatrick (shown below). It is approximately 30km<sup>2</sup>.



There are approximately 10 residential properties and fewer than 10 non-residential properties at risk of flooding. The Annual Average Damages are approximately £54,000.



**Figure 1: Annual Average Damages by flood source**

### Summary of flooding impacts

Coastal flooding from the North Channel is limited to a small number of locations along the western coastline, primarily around Portpatrick. Residential and non-residential properties are predicted to be at risk, along with stretches of the A77 road.

River flooding within this Potentially Vulnerable Area is primarily attributed to the Dinvin Burn which is partially culverted through Portpatrick. The Knock and Maize Burns to the north also present a small risk of river flooding, mainly to the A738 in the area of Portslogan Bridge. Interaction between river and coastal flooding is limited to the downstream extents of the Dinvin, Knock and Maize Burns, particularly in the areas of Portpatrick harbour, Knock Bay, Port Mora and Port Kale.

Within this Potentially Vulnerable Area it is estimated that climate change will increase the number of residential properties at risk of flooding from approximately 10 to 20.

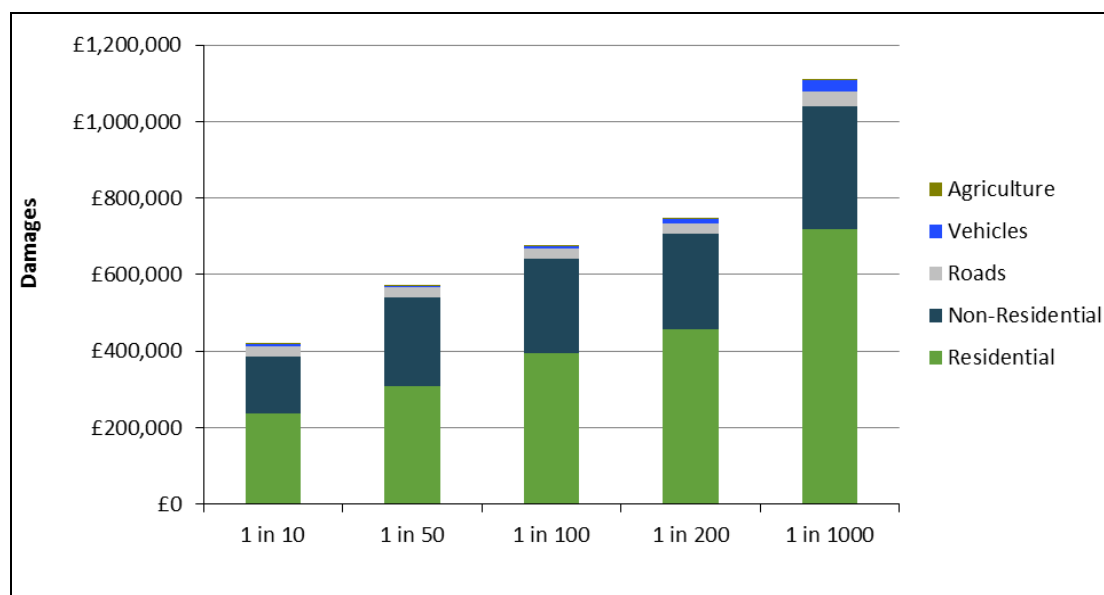
The risk of flooding to people and property, as well as to community facilities, utilities, the transport network, designated sites and agricultural land is summarised in Table 1. Most of the receptors at risk of flooding lie within Portpatrick.

The damages associated with floods of different likelihood are shown in Figure 2.

Residential properties affected by river flooding experience the highest economic impact with approximately 55% of the damages. The location of the impacts of flooding is shown in Figure 3.

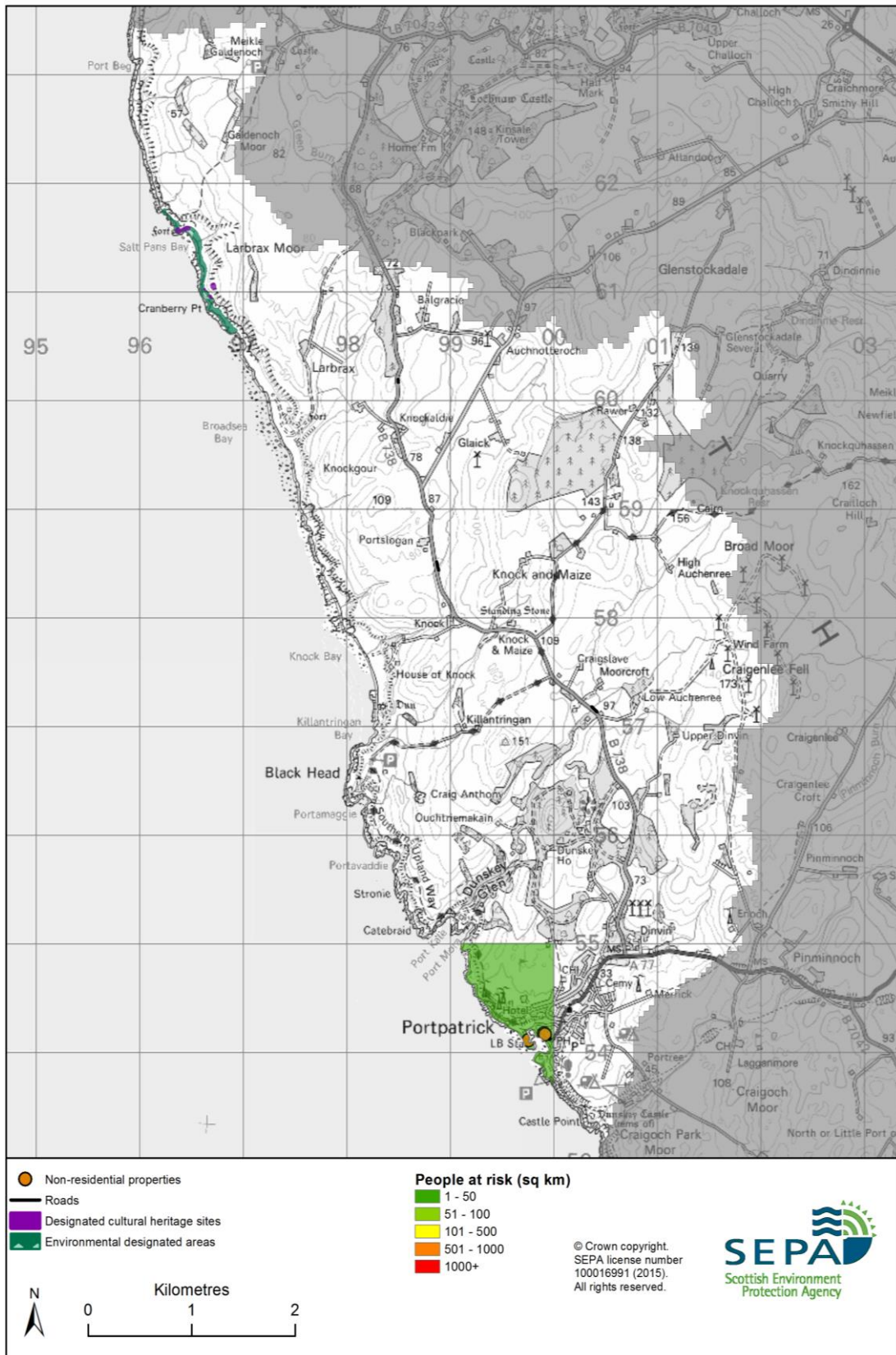
	1 in 10 High likelihood	1 in 200 Medium likelihood	1 in 1000 Low likelihood
Residential properties (total 430)	<10	<10	20
Non-residential properties (total 50)	<10	<10	<10
People	10	20	40
Community facilities	0	0	0
Utilities assets	0	0	0
Transport links - roads (km)	0.2	0.2	0.3
Environmental designated areas (km <sup>2</sup> )	<0.1	<0.1	<0.1
Designated cultural heritage sites	2	3	3
Agricultural land (km <sup>2</sup> )	<0.1	<0.1	<0.1

**Table 1:** Summary of flood impacts<sup>1</sup>



**Figure 2:** Damages by flood likelihood

<sup>1</sup> Some receptors are counted more than once if flooded from multiple sources



**Figure 3: Impacts of flooding**

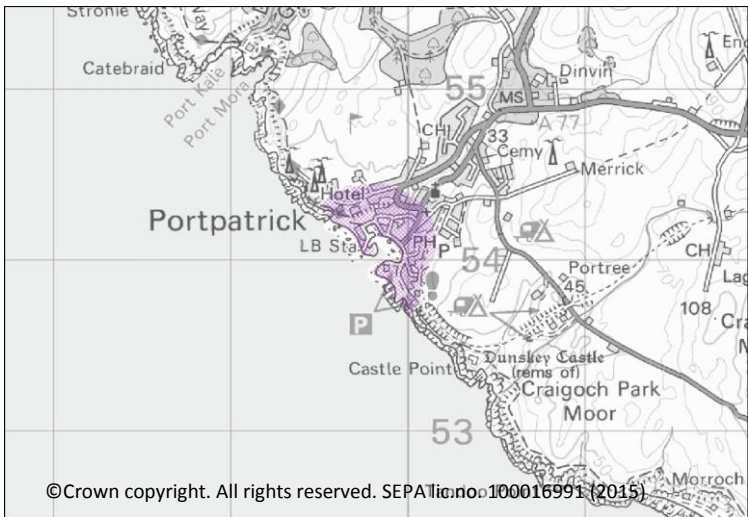
## History of flooding

Flooding in January 2014 caused damage to coastal defence structures in Portpatrick. The area of Portpatrick was also affected by coastal floods in the late 19th and early 20th Century.

The most recent major river flood in Portpatrick occurred in October 2000, when the burn overtopped its banks, flooding the Main Street and causing extensive damage to shops, hotels and houses. This flood ultimately led to the construction of the Portpatrick Flood Protection Scheme in 2004.

## Objectives to manage flooding in Potentially Vulnerable Area 14/14

Objectives provide a common goal and shared ambition for managing floods. These objectives have been set by SEPA and agreed with flood risk management authorities following consultation. They were identified through an assessment of the underlying evidence of the causes and impacts of flooding. Target areas have been set to focus actions; they do not necessarily correspond to areas at risk in SEPA’s flood map. The objectives below have been set for Portpatrick Potentially Vulnerable Area.

Accept the current standard of protection offered by the Portpatrick Flood Protection Scheme	
Indicators:	Target area:
<p>Scheme provides protection to:</p> <ul style="list-style-type: none"> <li>80 residential properties</li> <li>20 non-residential properties</li> </ul>	
Objective ID: 14018	

Target area	Objective	ID	Indicators within PVA
Applies across Solway Local Plan District	Avoid an overall increase in flood risk	14033	<ul style="list-style-type: none"> <li>10 residential properties</li> <li>£54,000 Annual Average Damages</li> </ul>
Applies across Solway Local Plan District	Reduce overall flood risk	14040	<ul style="list-style-type: none"> <li>10 residential properties</li> <li>£54,000 Annual Average Damages</li> </ul>
Applies across Solway Local Plan District	Organisations such as Scottish Water, energy companies and Historic Environment Scotland actively maintain and manage their own assets, including the risk of flooding. These actions are not detailed further in the Flood Risk Management Strategies.		

## Actions to manage flooding in Potentially Vulnerable Area 14/14

Actions describe where and how flood risk will be managed. These actions have been set by SEPA and agreed with flood risk management authorities following consultation. Selection of actions to deliver the agreed objectives was based on a detailed assessment and comparison of economic, social and environmental criteria. The actions shaded and then described below have been selected as the most appropriate for Portpatrick Potentially Vulnerable Area.

Selected actions					
<i>Flood protection scheme/works</i>	<i>Natural flood management works</i>	<i>New flood warning</i>	<i>Community flood action groups</i>	<i>Property level protection scheme</i>	<i>Site protection plans</i>
<i>Flood protection study</i>	<i>Natural flood management study</i>	Maintain flood warning	Awareness raising	<i>Surface water plan/study</i>	Emergency plans/response
Maintain flood protection scheme	Strategic mapping and modelling	Flood forecasting	Self help	Maintenance	Planning policies

<b>Action (ID):</b>	<b>STRATEGIC MAPPING AND MODELLING (140400016)</b>		
<b>Objective (ID):</b>	Reduce overall flood risk (14040)		
<b>Delivery lead:</b>	SEPA		
<b>Status:</b>	<b>Not started</b>	Indicative delivery:	<b>2016-2021</b>
<b>Description:</b>	SEPA will seek to develop flood mapping in the Greta to Portpatrick area to improve understanding of coastal flood risk. The extent and timing of improvements will depend on detailed scoping and data availability. Where this work coincides with local authority studies, SEPA will work collaboratively to ensure consistent modelling approaches are applied.		

<b>Action (ID):</b>	<b>MAINTAIN FLOOD PROTECTION SCHEME (140180017)</b>		
<b>Objective (ID):</b>	Accept the current standard of protection offered by the Portpatrick Flood Protection Scheme (14018)		
<b>Delivery lead:</b>	Dumfries and Galloway Council		
<b>Status:</b>	<b>Existing</b>	Indicative delivery:	<b>Ongoing</b>
<b>Description:</b>	Continue to maintain the existing Portpatrick flood defences. The Portpatrick Flood Protection Scheme was constructed in 2004 on behalf of Dumfries and Galloway Council and consisted of upstream attenuation areas, channel improvements, bridge raising, a storm bypass pipe and walls.		

<b>Action (ID):</b>	<b>MAINTAIN FLOOD WARNING (140400030)</b>		
<b>Objective (ID):</b>	Reduce overall flood risk (14040)		
<b>Delivery lead:</b>	SEPA		
<b>Status:</b>	<b>Existing</b>	Indicative delivery:	<b>Ongoing</b>
<b>Description:</b>	Continue to maintain the South West Rhins flood warning area which is part of the Solway coastal flood warning scheme.		

<b>Action (ID):</b>	<b>FLOOD FORECASTING (140400009)</b>		
<b>Objective (ID):</b>	Reduce overall flood risk (14040)		
<b>Delivery lead:</b>	SEPA		
<b>Status:</b>	<b>Existing</b>	Indicative delivery:	<b>Ongoing</b>
<b>Description:</b>	The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that produces daily, national flood guidance statements which are issued to Category 1 and 2 Responders. The service also provides information which allows SEPA to issue flood warnings, giving people a better chance of reducing the impact of flooding on their home or business. For more information please visit SEPA's website.		

<b>Action (ID):</b>	<b>SELF HELP (140400011)</b>		
<b>Objective (ID):</b>	Reduce overall flood risk (14040)		
<b>Delivery lead:</b>	—		
<b>Status:</b>	<b>Existing</b>	Indicative delivery:	<b>Ongoing</b>
<b>Description:</b>	<p>Everyone is responsible for protecting themselves and their property from flooding. Property and business owners can take simple steps to reduce damage and disruption to their homes and businesses should flooding happen. This includes preparing a flood plan and flood kit, installing property level protection, signing up to Floodline and Resilient Communities initiatives, and ensuring that properties and businesses are insured against flood damage.</p> <p>Dumfries and Galloway Council has a Pilot Flood Product Subsidy Scheme in place, it is recommended that this should be continued. Residential or business properties that are identified as being at risk of flooding are eligible for the scheme. There are various products to reduce the impact of flooding to properties which can be purchased as part of the scheme.</p>		



<b>Action (ID):</b>	<b>AWARENESS RAISING (140400013)</b>		
<b>Objective (ID):</b>	Reduce overall flood risk (14040)		
<b>Delivery lead:</b>	Responsible authorities		
<b>Status:</b>	<b>Existing</b>	Indicative delivery:	<b>Ongoing</b>
<b>Description:</b>	<p>SEPA and the responsible authorities have a duty to raise public awareness of flood risk. Improved awareness of flood risk and actions that prepare individuals, homes and businesses for flooding can reduce the overall impact.</p> <p>SEPA will engage with the community and promote Floodline in the South West Rhins coastal flood warning area . This will be achieved through direct mailing for flood warning areas and education events. Local authorities will be undertaking additional awareness raising activities. Further details will be set out in the Local FRM Plan.</p>		

<b>Action (ID):</b>	<b>MAINTENANCE (140400007)</b>		
<b>Objective (ID):</b>	Reduce overall flood risk (14040)		
<b>Delivery lead:</b>	Dumfries and Galloway Council, asset / land managers		
<b>Status:</b>	<b>Existing</b>	Indicative delivery:	<b>Ongoing</b>
<b>Description:</b>	<p>Local authorities have a duty to assess watercourses and carry out clearance and repair works where such works would substantially reduce flood risk. They produce schedules of clearance and repair works and make these available for public inspection. Scottish Water undertake inspection and repair on the public sewer network. Asset owners and riparian landowners are responsible for the maintenance and management of their own assets including those which help to reduce flood risk.</p> <p>Dumfries and Galloway Council also have sections of coastal defences including a concrete seawall at Portpatrick. There are also privately owned retaining wall defences at Portpatrick.</p> <p>Dumfries and Galloway Council has recently undertaken works in Hill Street, Portpatrick, to manage surface water flows into an upgraded culvert network with discharge to the sea.</p>		

<b>Action (ID):</b>	<b>EMERGENCY PLANS/RESPONSE (140400014)</b>		
<b>Objective (ID):</b>	Reduce overall flood risk (14040)		
<b>Delivery lead:</b>	Category 1 and 2 Responders		
<b>Status:</b>	<b>Existing</b>	Indicative delivery:	<b>Ongoing</b>
<b>Description:</b>	<p>Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA. Effective management of an emergency response relies on emergency plans that are prepared under the Civil Contingencies Act 2004 by Category 1 and 2 Responders. The emergency response by these organisations is co-ordinated through regional and local resilience partnerships. This response may be supported by the work of voluntary organisations.</p> <p>Dumfries and Galloway Council along with the Scottish Fire and Rescue Service, SEPA and the Scottish Flood Forum have procured a Flood Pod. The Pod can be deployed to an area at risk of a flood emergency and is filled with flood protection equipment which is issued to the public.</p>		

<b>Action (ID):</b>	<b>PLANNING POLICIES (140330001)</b>		
<b>Objective (ID):</b>	Avoid an overall increase in flood risk (14033) Reduce overall flood risk (14040)		
<b>Delivery lead:</b>	Planning authority		
<b>Status:</b>	<b>Existing</b>	Indicative delivery:	<b>Ongoing</b>
<b>Description:</b>	<p>Scottish Planning Policy and accompanying Planning Advice Notes set out Scottish Ministers' priorities for the operation of the planning system and for the development and use of land. In terms of flood risk management, the policy supports a catchment-scale approach to sustainable flood risk management and aims to build the resilience of our cities and towns, encourage sustainable land management in our rural areas, and to address the long-term vulnerability of parts of our coasts and islands. Under this approach, new development in areas with medium to high likelihood of flooding should be avoided. For further information on the application of national planning policies see Annex 2.</p>		